

CRISIS ON THE COAST



Demand

Growing coastal populations and society's increasing use of coastal land and water areas is having significant impact upon coastal resources and the communities and economies that depend on them. Inadequate planning for and management of multiple uses has resulted in loss and degradation of coastal habitats, increased coastal pollution and contamination, and has increased the costs of natural hazards. Expanding nearshore uses such as offshore energy development, shipping, and aquaculture will increase the demand to sustainably manage coastal areas.

The Joint Ocean Commission Initiative (JOCI), in its 2007 US Ocean Policy Report Card, reinforces the need to unify the nation around "a common goal of protecting and restoring our ocean and coastal ecosystems," and encourages the passage of a reauthorized Coastal Zone Management Act (CZMA) to provide a clear, national direction for the management of our coasts. The JOCI stresses the need for new and enhanced regional alliances to identify and respond to needs and develop and disseminate regionally significant science and information. The Intergovernmental Panel on Climate Change (IPCC) reports that the adaptive capacity of coastal communities is the most important factor in reducing human vulnerability to the impacts of climate change.

As the nation's ocean and coastal agency, there is a clear need for NOAA to expand its leadership role and focus its science, capacity building, education, policy and management capabilities on the most urgent coastal problems. Working directly with states and localities, there is a public demand for NOAA to:

- Conserve, protect and restore coastal habitat in the face of increasing loss and degradation,
- Mitigate and reduce impacts to communities from natural hazards, environmental degradation, and human health threats, exacerbated by climate change,

Provide the best available science, tools, technologies, and training to federal, regional, state and local decision makers,

- Mediate diverse and competing uses across levels of government, and

- Set national priorities to focus federal, state, and regional investment on the most important coastal problems.

NOAA Role

As a result of its statutory mandates, NOAA has the authority and responsibility to establish national priorities and promote multi-sector management of coastal resources at local, state, regional and national scales. NOAA has unique responsibilities and mandates for:

- Stewardship and protection of trust resources,
- Systematic observation and monitoring,
- Protection and restoration of critical coastal and marine habitats,
- Mitigation of impacts of coastal hazards on life and property,
- Research to address priority issues, and
- Delivery of and access by managers to relevant science, information, and tools to manage multiple and often competing uses in the coast.

Legislative mandates include the Coastal Zone Management Act, National Marine Sanctuary Act, Harmful Algal Bloom and Hypoxia Research and Control Act, National Sea Grant College and Program Act, Inland Flooding and Forecasting Act, Marine Protected Areas Executive Order, and Magnuson Stevens Reauthorization Act.

NOAA's Current Capabilities

NOAA currently has strong, broad capabilities in:

- Providing Science: Conducting mission-oriented research and technology development; and coastal monitoring, observations, and mapping
- Building Capacity: Enabling state and local managers to make full use of NOAA services through training, technological tools, and technical assistance, as well as education and public awareness programs

- Managing: Creating and implementing best management practices and conserving and restoring critical habitat
- Promoting Collaboration: Expanding the impact of coastal investments by leveraging partner capabilities and resources essential to management of coastal resources

Gaps and Solutions

Fragmented decision-making by a single sector or locality does not adequately address complex regional and national challenges. Government and other decision-makers are in urgent need of additional tools, strategies and coordinated management actions to reduce the impacts on the people, property and valuable natural resources of the nation's coasts.

A comprehensive approach involving different levels of government is needed to address the challenge of growing coastal population and associated land uses. The NOAA solution addresses this need for accurate information to understand the problems and design solutions and couples it with capacity building at the state and local level to achieve more successful outcomes. To address these gaps, NOAA will:

Assess National Needs and Improve Research

- Conduct integrated ecosystem assessments to identify, prioritize, protect and restore critical habitats in every region
- Identify gaps in protected area coverage to establish sentinel sites for monitoring impacts from climate change and extreme weather events
- Initiate socioeconomic research on communities and societal uses to improve decision making

Develop Tools and Build Decision-making Capacity

- Develop and disseminate coastal adaptation planning and mitigation strategies to address threats from natural hazards and climate change
- Translate scientific climate information into application-specific products and services that

support regional to local decision making

Directly Manage and Influence Others

- Authorize the Coastal Zone Management Act to include national goals and priorities, and strengthened incentives for achieving goals

Impacts and Benefits

Merely 17% of the nation's land area is coastal, but it supports over 50% of our population and generates nearly 60% of US gross domestic product. Coastal areas contain the nation's most diverse, valuable and at-risk habitats, which support 90% of ocean-dependent commercial and sport fish species, provide billions of recreation and tourism dollars annually, and protect coastal communities from storms, floods and other hazards. Coasts are the first line of defense in tackling the impacts from climate change, rising vulnerability and costs due to more frequent and severe storms and sea-level rise.

NOAA, with its partners, will achieve the following specific outcomes:

- Reduce vulnerabilities of populations and critical infrastructure by increasing the adaptive capacity of coastal communities
- Protect and restore coastal ecosystems and their services
- Meet society's coastal needs sustainably in the face of diverse and competing uses

UNITED STATES DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

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